GENERAL NOTES

UNLESS OTHERWISE NOTED:

1. LANDSCAPING THAT IS DAMAGED BY THE CONTRACTOR'S ACTIVITIES SHALL BE RESTORED IN KIND AS DIRECTED BY THE ENGINEER.
2. EXISTING FACILITIES NOTED AS "EXISTING" ARE SHOWN IN LIGHT LINE WEIGHT AND NEW STRUCTURES ARE SHOWN IN HEAVY LINE WEIGHT.
3. CONTRACTOR SHALL NOTIFY OWNERS OF ALL AFFECTED UNDERGROUND UTILITIES FOR FIELD LOCATING THEIR FACILITIES AT LEAST TWO DAYS IN ADVANCE. THE ONE-CALL "CALL BEFORE YOU DIG" NUMBER IS 1-800-424-5555.

ELECTRICAL NOTES

UNLESS OTHERWISE NOTED:

1. ALL WIRE SHALL BE COPPER WITH THWN/THHN INSULATION AND RATED AT 600V. CONDUCTORS SIZED #10 OR SMALLER MAY BE SOLID; CONDUCTORS LARGER THAN #10 SHALL BE STRANDED. USE NEW WIRE FROM SERVICE POINT (SEATTLE CITY LIGHT CONNECTION) TO METER TO EXISTING FUSIBLE DISCONNECT IN STATION.
2. ALL CONDUIT SHALL BE RIGID GALVANIZED STEEL (RGS) UNLESS OTHERWISE NOTED. WRAP ALL JOINTS WITH 20 MIL ALL-WEATHER CORROSION PROTECTION TAPE (SUCH AS SCOTCHRAP 51)
3. CORE DRILL ALL CONDUIT PENETRATIONS THROUGH STRUCTURES UNLESS OTHERWISE NOTED.
4. PROVIDE LINK SEAL MODULAR WALL SEALS FOR ALL CONDUIT PENETRATIONS UNLESS OTHERWISE NOTED. WALL OPENING SIZE SHALL BE AS RECOMMENDED BY WALL SEAL MANUFACTURER. GROUTING SHALL NOT BE USED.
5. EXISTING CONDUIT LOCATIONS ARE APPROXIMATE. FIELD VERIFY
6. NEW CONDUIT LOCATIONS ARE NOT TO SCALE. ROUTE AS REQUIRED BY FIELD CONDITIONS. SUBMIT PLAN TO ENGINEER PRIOR TO INSTALLATION.
7. REMOVE EXISTING NEUTRAL-GROUND BOND IN EXISTING HEAVY DUTY FUSIBLE DISCONNECT IN STATION. NEW SERVICE DISCONNECT IS LOCATED AT THE NEW METER-MAIN OUTSIDE THE STATION. ENSURE IT IS THE ONLY LOCATION OF A NEUTRAL GROUND BOND.
8. THE GROUNDING ELECTRODE SHALL CONSIST OF TWO NEW GROUND RODS AND A CONCRETE ENCASED ELECTRODE (AT LEAST 20 FEET OF ½" D REBAR IN THE NEW CONCRETE SLAB PER 1999 NEC 250-50 (C).). EXISTING GROUND ROD CONNECTION TO GROUND BUS IN EXISTING DISCONNECT IN STATION TO REMAIN (REMOVE BOND TO NEUTRAL. SEE NOTE 7).

STRUCTURAL NOTES

UNLESS OTHERWISE NOTED:

MATERIAL:

CONCRETE: PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS.

CLASS AX FOR WALL CONSTRUCTION.
f'c = 4,000 PSI, fc = 1,600 PSI

REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615) GRADE 60. CONCRETE COVER TO BE 2 INCHES

STRUCTURAL STEEL: STRUCTURAL CARBON STEEL FOR SHAPES AND PLATES SHALL CONFORM TO AASHTO M183 (ASTM A36); ALL STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

MACHINE BOLT: MACHINE BOLTS SHALL CONFORM TO ASTM-A307 AS SHOWN ON THE PLANS.

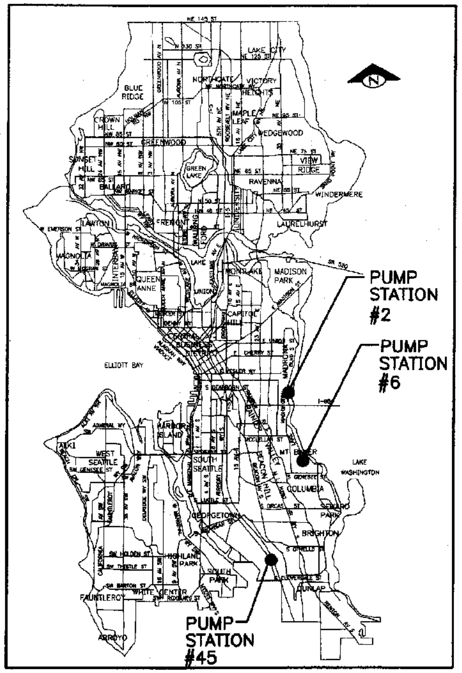
PREFORMED JOINT FILLER: PREFORMED JOINT FILLER SHALL MEET THE REQUIREMENTS OF AASHTO M33, M153, OR M213; EXCEPT EXPANDED POLYSTYRENE SHALL MEET AASHTO M230.

ALL CONNECTION MATERIALS, SUCH AS PLATES, ANGLES, POST BASES, MACHINE BOLTS, STAPLES, NAILS, SCREWS, CABLES, SWAGE SOCKETS, EYE BOLTS, TURNBUCKLES, ANCHORS, AND HARDWARES ETC, SHALL BE GALVANIZED.

WELDING SHALL CONFORM TO THE CODES AND PROVISIONS SPECIFIED IN THE STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 1991 AND CURRENT AMENDMENTS THERETO. WELDING ELECTRODES SHALL BE E70XX.

SHEET INDEX

SHT NO.	SHEET DESCRIPTION
1	VICINITY MAP, DETAIL & SECTION REFERENCING, SHT INDEX NOTES
2-3	PUMP STATION #2, 901 LAKESIDE AVE S
4	PUMP STATION #6, 4845 LAKE WASHINGTON BLVD. S. PUMP STATION #45, 7609 PERIMETER ROAD S
5-6	ELECTRICAL DETAILS & NOTES



VICINITY MAP
NTS

DETAIL AND SECTION REFERENCING

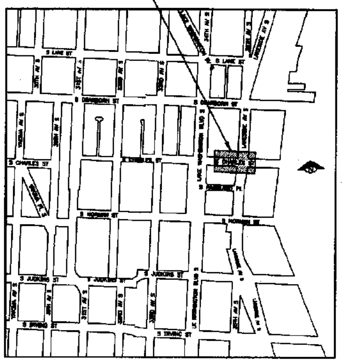
(4 / 8) — DETAIL REFERENCE NUMBER — SHEET ON WHICH DETAIL APPEARS

(TITLE) (SCALE) (4 / 9) — DETAIL REFERENCE NUMBER — SHEET FROM WHICH DETAIL WAS TAKEN

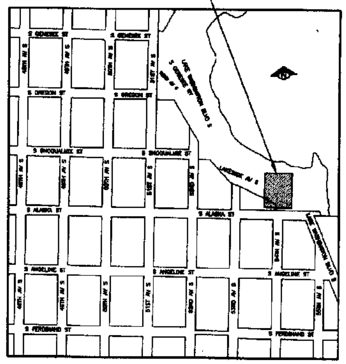
("TYP" SPECIFIES THAT DETAIL IS UNIFORMLY TYPICAL THROUGHOUT PROJECT EXCEPT WHERE OTHERWISE NOTED.) ("VAR" SPECIFIES THAT DETAIL WAS TAKEN FROM SEVERAL SHEETS.)

A — A 32: SECTION A-A IS SHOWN ON SHEET 32.

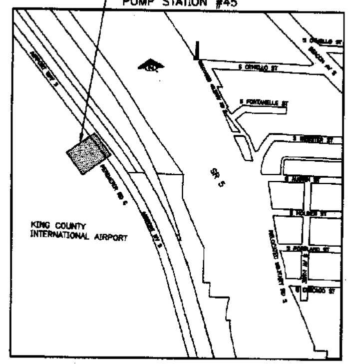
SECTION A-A 30: SECTION A-A IS TAKEN FROM SHEET 30.



LOCATION MAP
SCALE: 1" = 400'



LOCATION MAP
SCALE: 1" = 400'



LOCATION MAP
SCALE: 1" = 400'

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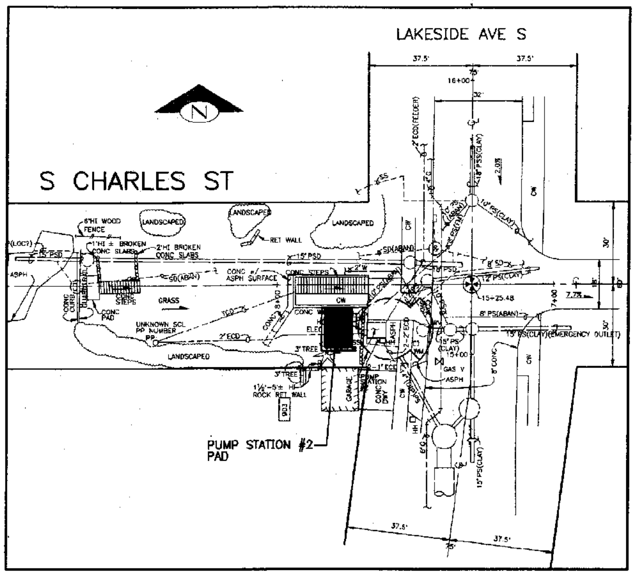
DIRECTOR OF FINANCE
SEATTLE, WASHINGTON 12-12 2001
BY: Elijah Alger
CONTRACTING MANAGER

City of Seattle
Seattle Public Utilities
Diana Gale, Director

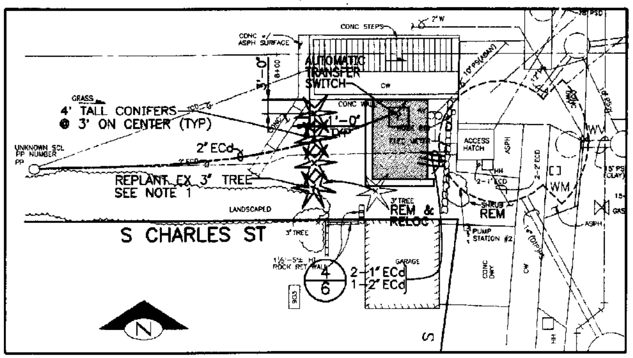
SCALE: AS NOTED

PUMP STATION IMPROVEMENT
PUMP STATION #2, #6, #45

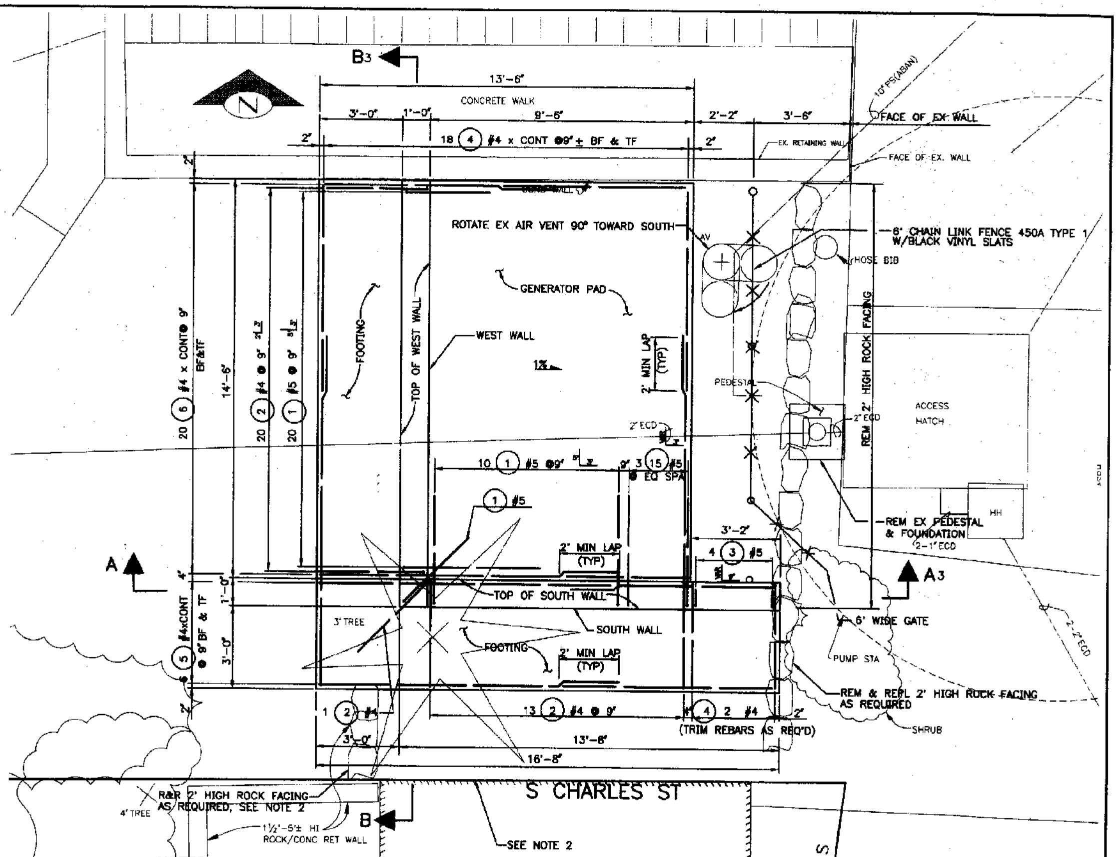
PC C3AA406
CO C3AA406
VAULT PLAN NO. 777-544
SHEET 1 OF 6



SITE PLAN
SCALE: 1" = 20'



PUMP STATION #2 – IMPROVEMENT PLAN
SCALE: 1" = 10'



NOTES
1. THE CONTRACTOR SHALL CONTACT SHANE DEWALD, CITY LANDSCAPE ARCHITECT (206-684-5041) AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION FOR AN APPROVAL OF RELOCATION.
2. CARE SHALL BE TAKEN WHEN EXCAVATING NEAR THE GARAGE.

○ CIRCLE INDICATES BAR ID

PLAN – RETAINING WALL, GENERATOR PAD & FOOTING REINFORCEMENT DETAIL
SCALE: ½" = 1'-0"

PUMP STATION #2
SITE PLAN & PLAN

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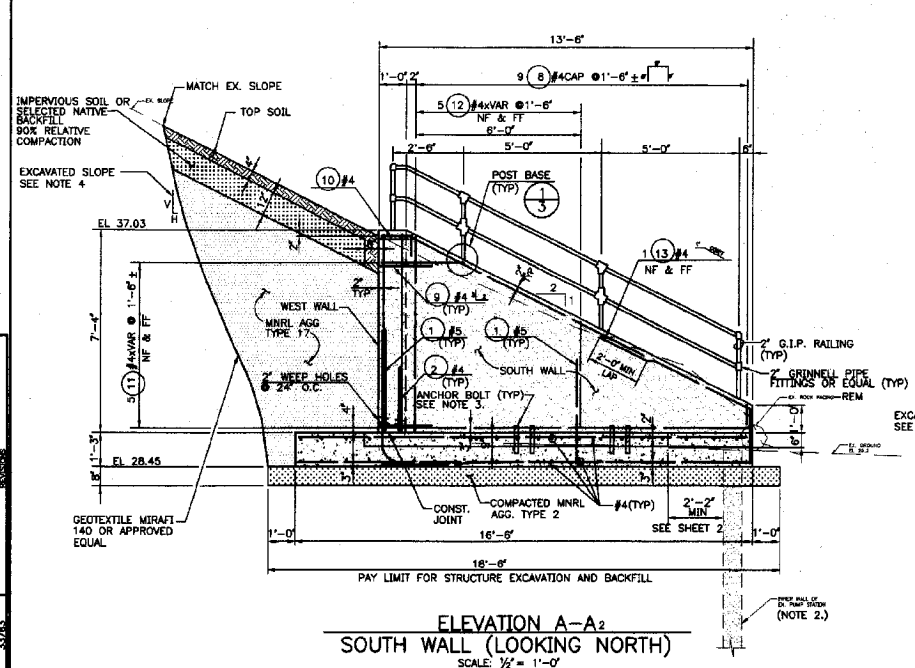
PUMP STATION IMPROVEMENT
PUMP STATION #2, #6, #45

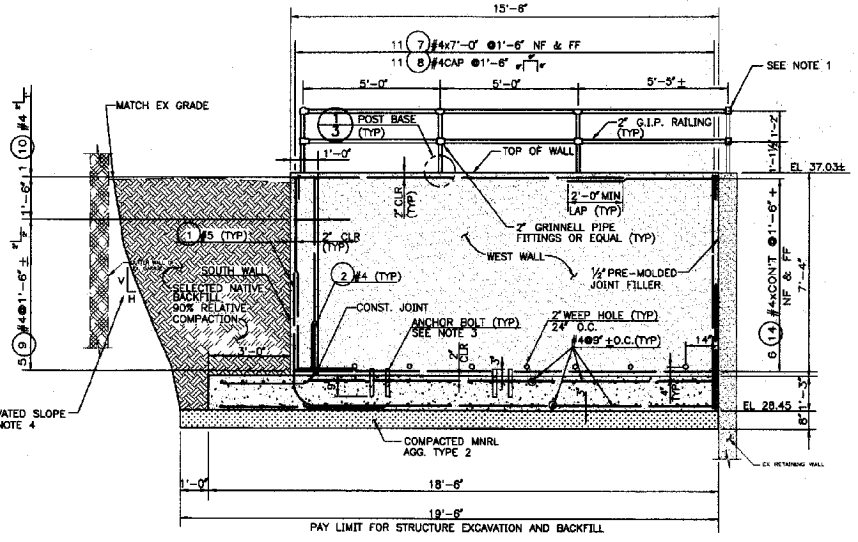
PC C3AA406
CO C3AA406
VAULT PLAN NO. 777-544
SHEET 2 OF 6

KCSlip4 33946

SEA400493



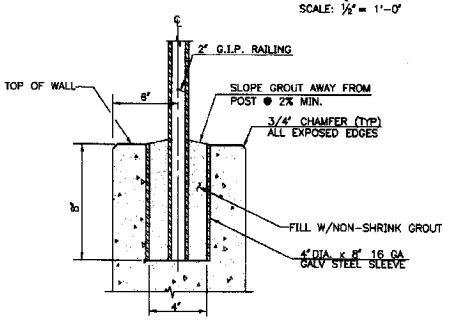
ELEVATION A–A2
SOUTH WALL (LOOKING NORTH)
SCALE: ½" = 1'-0"



ELEVATION B–B2
WEST WALL (LOOKING WEST)
SCALE: ½" = 1'-0"

NOTES:

1. THE CONTRACTOR SHALL SUBMIT CONNECTION DETAIL FROM PROPOSED TO EXISTING RAILING.
2. THE CONTRACTOR SHALL VERIFY THE OUTER EDGE OF EXISTING PUMP STATION PRIOR TO START OF CONSTRUCTION.
3. ANCHOR BOLT W/NUT AND WASHER SHALL BE STAINLESS STEEL. ANCHOR BOLT AND CONDUIT SHALL BE INSTALLED PER MANUFACTURER'S GUIDELINE. GENERATOR SHALL BE LOCATED ON THE CENTER OF THE GENERATOR PAD.
4. MAXIMUM SLOPE DEPENDS ON SOIL CONDITIONS. SEE BORING INFORMATION IN SPECIAL PROVISION.
5. CARE SHALL BE TAKE WHEN EXCAVATING NEAR THE GARAGE.



POST BASE (1/3)
NTS

PUMP STATION #2
ELEVATION AND DETAIL

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SEATTLE, WASHINGTON 20
BY: CONTRACTING MANAGER

NAME OR INITIALS AND DATE	INITIALS AND DATE
DESIGNED	REVIEWED:
CHECKED	DES. CONST.
DRAWN	SEATRAN PROJ. MGR.
CHECKED	REVISED AS BUILT

ALL WORK DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER REQUIREMENTS CALLED FOR IN SECTION 1-05.1 OF THE PROJECT MANUAL.

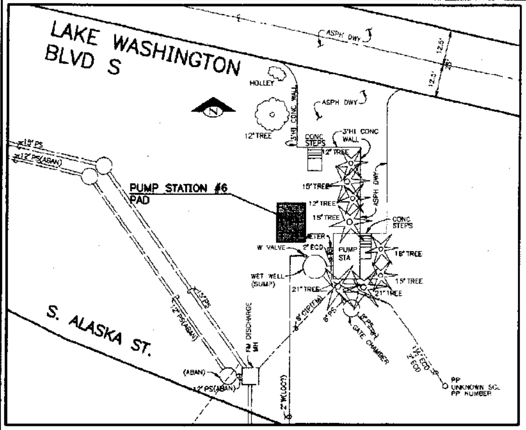
City of Seattle
Seattle Public Utilities
Diana Gale, Director
ORDINANCE NO. APPROVED
FUNC: SCALE: AS NOTED INSPECTOR'S BOOK

PUMP STATION IMPROVEMENT
PUMP STATION #2, #6, #45

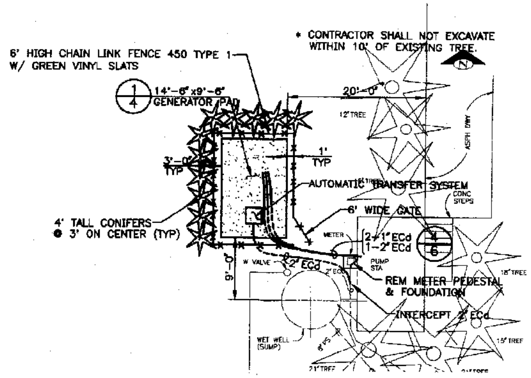
JOB NO. PC C3A4406 R/W CO C3A4406
VAULT PLAN NO. 777-544
SHEET 3 OF 6

KCSlip4 33947

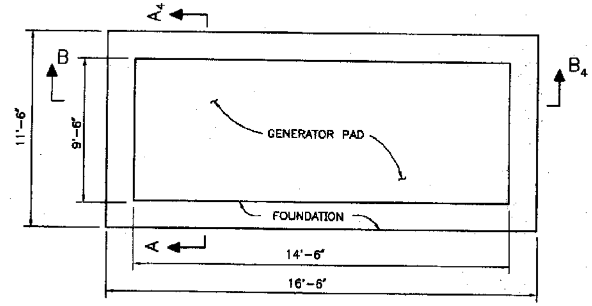
SEA400494



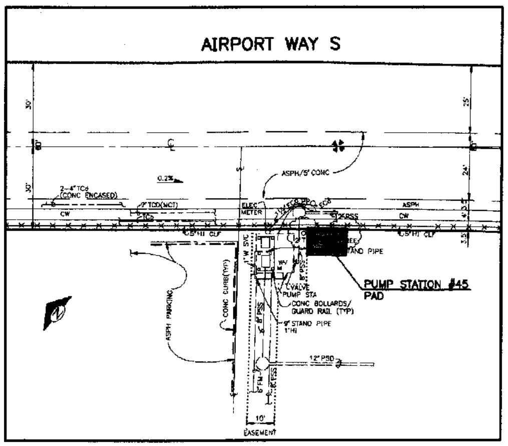
SITE PLAN
SCALE: 1"=20'



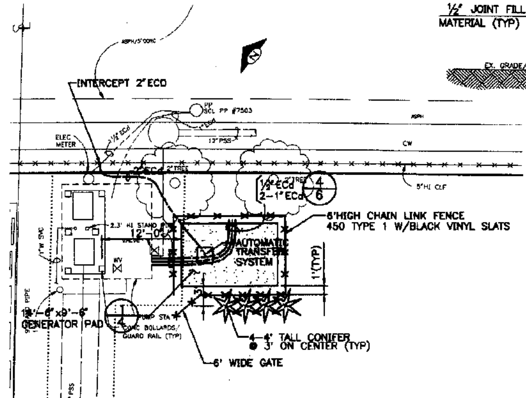
PUMP STATION #6 – IMPROVEMENT PLAN
SCALE: 1"=10'



PLAN – GENERATOR PAD FOR STA #6 & #45
SCALE: ½"=1'-0"



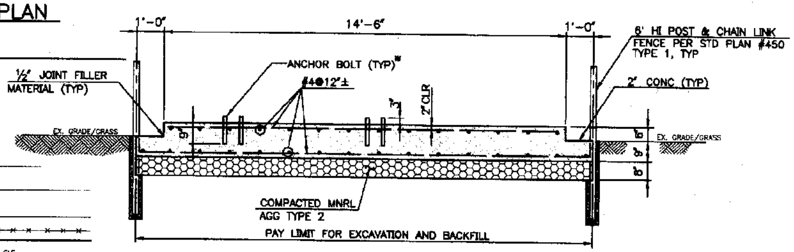
SITE PLAN
SCALE: 1"=20'



NOTE:
CONTACT KATE DONLEY (206-205-5571) AND RICK RENAUD (206-296-7027) AT KING COUNTY, FOR RELOCATION ONE WEEK PRIOR TO START OF CONSTRUCTION.

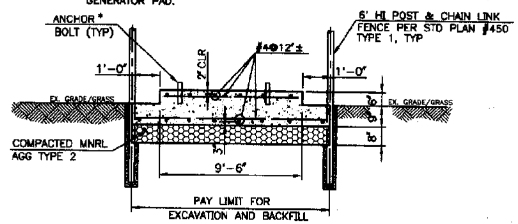
PUMP STATION #45 IS NOT ACCESSABLE THROUGH AIRPORT WAY S.

PUMP STATION #45 – IMPROVEMENT PLAN
SCALE: 1"=10'



SECTION B–B4
SCALE: ½"=1'-0"

* NOTE:
1. ANCHOR BOLT AND CONDUIT LOCATIONS PER MANUFACTURER
2. GENERATOR SHALL BE LOCATED ON THE CENTER OF THE GENERATOR PAD.



SECTION A–A4
SCALE: ½"=1'-0"

PUMP STATION #6 & #45
SITE PLANS & PLANS

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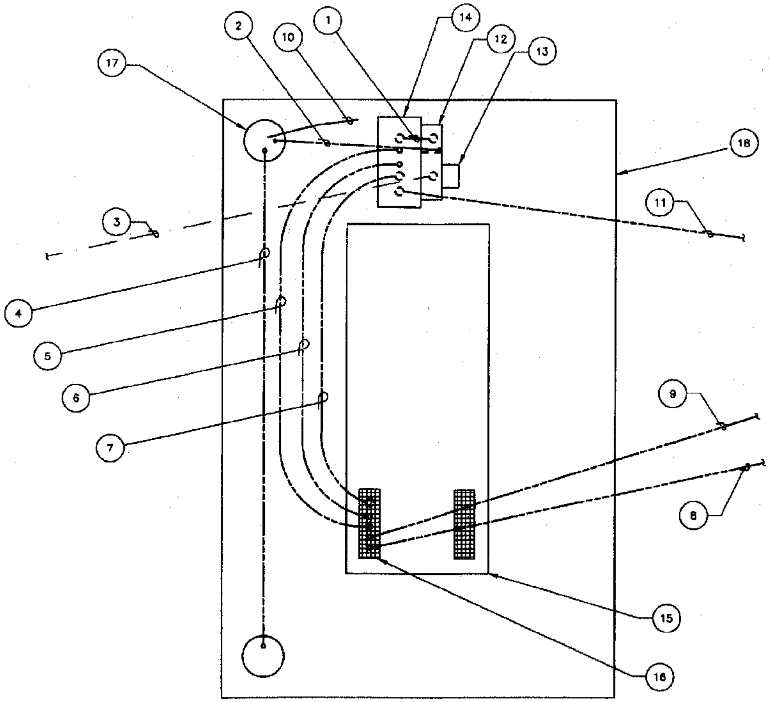
Seattle Public Utilities
Diana Gale, Director

PUMP STATION IMPROVEMENT
PUMP STATION #2, #6, #45

PC C3AA406
CO C3AA406
VAULT PLAN NO. 777-544
SHEET 4 OF 6

KCSlip4 33948

SEA400495



TYPICAL ELECTRICAL DETAIL
NTS

PUMP STA #2 – LOAD CALCULATIONS

LOAD	VOLTS	PHASES	AMPS	FACTOR	kVA
PUMP #1 (10 HP) (EXISTING)	240	3	28	1.25	14.5
PUMP #2 (10 HP) (EXISTING)	240	3	28	1.00	11.6
1 PHASE PANEL (EXISTING LOAD)	240/120	1	24	1.00	5.8
1 PHASE PANEL (NEW LOAD)	120	1	12	1.25	1.8
TOTAL					33.7**

** 81A PER PHASE

KEYED NOTES

UNLESS OTHERWISE NOTED:

1. 2" RGS POWER CONDUIT FROM SERVICE DISCONNECT TO TRANSFER SWITCH (4 #2 THHN)
2. ¾" SCHED. 80 PVC CONDUIT FROM SERVICE DISCONNECT TO GROUND ROD WELL (1 #4 BARE STRANDED CU)
3. FOR PUMP STATION #2 AND #6. 2" RGS POWER CONDUIT FROM METER TO INTERCEPTED EXISTING 2" CONDUIT FROM POLE (4 #2 THHN). FOR PUMP STATION #45. 2" RGS POWER CONDUIT FROM METER TO AND UP POLE PER SEATTLE CITY LIGHT REQUIREMENTS (4 #2 THHN). REMOVE EXISTING 1-½" CONDUIT.
4. ¾" SCHED. 80 PVC CONDUIT BETWEEN GROUND ROD WELLS (1 #4 BARE STRANDED CU)
5. 1" RGS SIGNAL CONDUIT FROM TRANSFER SWITCH TO GENERATOR (14 #16 THHN)
6. 1" RGS CONTROL CONDUIT FROM TRANSFER SWITCH TO GENERATOR (5 #16 THHN)
7. 2" RGS POWER CONDUIT FROM TRANSFER SWITCH TO GENERATOR (4 #2 THHN)
8. 1" RGS SIGNAL CONDUIT FROM GENERATOR TO TELEMETRY PANEL IN STATION (14 #16 THHN). SEE WALL PENETRATION DETAIL 4/6.
9. 1" RGS POWER CONDUIT FROM GENERATOR TO POWER DISTRIBUTION PANEL IN STATION (3 #10 THHN). SEE WALL PENETRATION DETAIL 4/6.
10. #4 BARE STRANDED CU CONDUCTOR FROM REBAR CONNECTION TO GROUNDING ELECTRODE CONDUCTOR CONNECTION IN GROUND ROD WELL. SEE DETAIL 1/6.
11. POWER CONDUIT FROM TRANSFER SWITCH TO INTERCEPTED EXISTING POWER CONDUIT TO EXISTING MAIN FUSIBLE DISCONNECT INSIDE STATION. (4 #2 THHN) FOR STATION #2 AND #6 – 2" RGS. FOR STATION #45 – 1½" RGS. SEE WALL PENETRATION DETAIL 4/6.
12. COMBINATION METER/MAIN – SAFETY SOCKET WITH FACTORY INSTALLED 100 AMP BREAKER AND TEST/BYPASS FACILITIES.
13. METER: FURNISHED BY CONTRACTOR (SUPPLIED AND INSTALLED BY SEATTLE CITY LIGHT).
14. ONAN AUTOMATIC TRANSFER SWITCH: SUPPLIED BY CITY, INSTALLED BY CONTRACTOR. WHERE AS DIRECTED BY INSTALLATION MANUALS. SUBMIT PLAN FOR APPROVAL.
15. ONAN 50 KW GENERATOR IN QUIET SITE II ENCLOSURE: SUPPLIED BY CITY, INSTALLED BY CONTRACTOR. FOR PUMP STATION #2 AND #45. ONAN 35 KW GENERATOR IN QUIET SITE II ENCLOSURE: SUPPLIED BY CITY, INSTALLED BY CONTRACTOR. FOR PUMP STATION #6.
16. CONDUIT STUB UP AREA PER MANUFACTURER REPRESENTATIVE. VERIFY WITH ACTUAL UNIT BEFORE FINALIZING CONDUIT RUNS.
17. ONE OF TWO GROUND ROD WELLS. SEE DETAIL 1/6. SECOND WELL SIMILAR BUT ONLY WITH GROUND ROD CONNECTION.
18. TOP SURFACE OF GROUND ROD WELLS SHALL BE AT THE FINISH GRADE OF THE TOP SURFACE OF THE CONCRETE PAD. 9'-6" X 14'-6" CONCRETE PAD.

PUMP STA #6 – LOAD CALCULATIONS

LOAD	VOLTS	PHASES	AMPS	FACTOR	kVA
PUMP #1 (5 HP) (EXISTING)	240	3	15.2	1.25	7.9
PUMP #2 (5 HP) (EXISTING)	240	3	15.2	1.00	6.3
1 PHASE PANEL (EXISTING LOAD)	240/120	1	18	1.00	4.4
1 PHASE PANEL (NEW LOAD)	120	1	12	1.25	1.8
TOTAL					20.4**

** 49A PER PHASE

PUMP STA #45 – LOAD CALCULATIONS

LOAD	VOLTS	PHASES	AMPS	FACTOR	kVA
PUMP #1 (10 HP) (EXISTING)	240	3	28	1.25	14.5
PUMP #2 (10 HP) (EXISTING)	240	3	28	1.00	11.6
1 PHASE PANEL (EXISTING LOAD)	240/120	1	16	1.00	3.8
1 PHASE PANEL (NEW LOAD)	120	1	12	1.25	1.8
TOTAL					31.7**

** 76A PER PHASE

ELECTRICAL DETAILS & NOTES

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CHECKED DAlmas 7/23/2001
DRAWN
CHECKED
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Seattle Public Utilities
Diana Gale, Director
ORDINANCE NO. APPROVED
FUND:
SCALE: AS NOTED INSPECTOR'S BOOK

PUMP STATION IMPROVEMENT
PUMP STATION #2, #6, #45

JOB NO. PC C3AA406
R/W
CO C3AA406
VAULT PLAN NO. 777-544
SHEET 5 OF 6

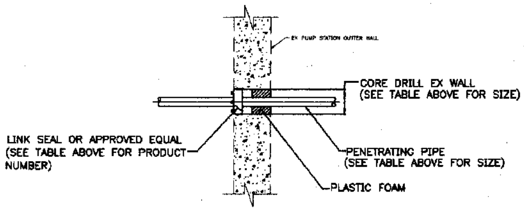
KCSlip4 33949

SEA400496

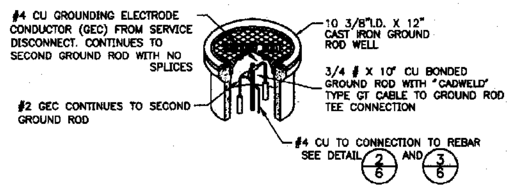
TABLE FOR LINK SEAL

PENETRATING PIPE ø*	CORE SIZE	LINK SEAL PRODUCT OR APPROVED EQUAL
1"ø	3"ø	LS-300-4 LINKS
1½"ø	3½"ø	LS-300-5 LINKS
2"ø	4"ø	LS-300-6 LINKS

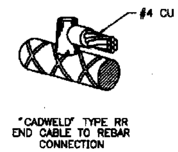
* DIAMETERS SHOWN ARE FOR WALL PENETRATION SEALS MADE BY LINK SEAL.



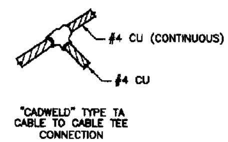
WALL PENETRATION DETAIL 4/2,4
NTS



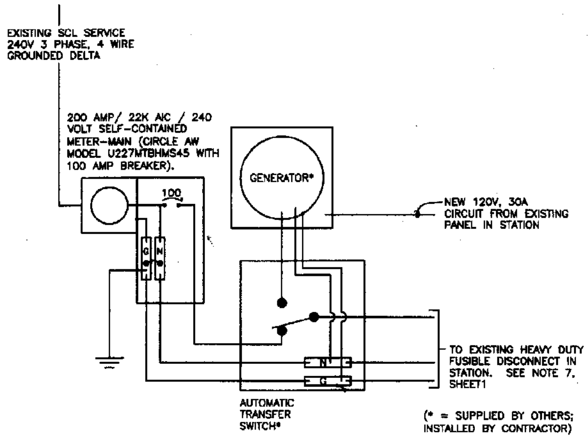
GROUND ROD DETAIL 1/5
NTS



CABLE TO REBAR CONNECTION DETAIL 2/6
NTS



CABLE TO CABLE CONNECTION DETAIL 3/6
NTS



TYPICAL ONE LINE DIAGRAM
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KCSlip4 33950

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INITIALS AND DATE
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City of Seattle
Seattle Public Utilities
Diana Gale, Director
ORDINANCE NO. APPROVED
FUND:
SCALE: AS NOTED INSPECTOR'S BOOK

ELECTRICAL DETAILS

PUMP STATION IMPROVEMENT
PUMP STATION #2, #6, #45

JOB NO. PC C3AA406 R/W CO C3AA406
VAULT PLAN NO. 777-544
SHEET 6 OF 6